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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,152	06/08/2005	Marie-Catherine Fritsch	2002P18325WOUS	3257
7590 02/06/2007				
Siemens Corporatio Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830		EXAMINER SINGH, HIRDEPAL		
		ART UNIT PAPER NUMBER		
		2109		
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/06/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/538,152	Applicant(s) FRITSCH ET AL.	
	Examiner Hirdepal Singh	Art Unit 2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/8/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the Preliminary amendment filed on June 8, 2005.

The Preliminary amendment cancelled the claims 1-12 and added new claims 13-32. Thus claims 13-32 are pending and have been considered below.

Specification

2. The disclosure is objected to because of the following informalities: the examiner notes the use of acronyms (CAD, CAE etc.) throughout the specification without first including a description in plain text, as required.

Appropriate correction is required.

3. The disclosure is objected to because of the following informalities: on page 5, paragraph 0014, line2 it reads as ".... that fourth means are provided..." it seems like a typo error, examiner suggests to take the word "fourth" out.

Appropriate correction is required.

Double Patenting

4. Applicant is advised that should claim13 be found allowable, claim 32 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is

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proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 13, 17, 26, 29, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Burgess (US 5,805,896).

Claims 13, 26, and 32: Burgess discloses a system and method for producing software/code using links of the components of the system (summary of the invention).

a. components having input and output ports are represented by corresponding symbols/functional blocks/modules (column 1, lines 45-64; column 2, lines 65-67; column 3, lines 1-19);

b. components are connected through their ports, direction of the connection is indicated between input and output ports (column 3, lines 29-34, lines 54-57; column 4, lines 1-16);

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c. sending messages between the components through the ports and the data is being transferred between the components (column 2, lines 23-30), therefore it is inherent that the message transfer is taking place as signals through the ports;

d. the event object includes message information describing the message and a dispatching member (column 2, lines 28-41), and a component may send messages corresponding to different events (column 3, lines 58-66), the information included in the messages can be referred to as metainformation;

e. producing a program code by interconnecting the signals based on the directed connections of the components (column 4, lines 35-50; producing a class is referred to as a program code).

Claims 17, and 29: Burgess discloses a system and method for producing code using links of the components of the system as in claims 13, and 26 above, and further discloses input device/means for inputting relevant information for producing software code (column 14, lines 12-18; fig 9).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess (US 5,805,896) in view of Sakurai et al. (US 6,334,076).

Claims 14, and 27: Burgess discloses a system and method for producing a software code as in claims 13, and 26 above, but doesn't explicitly disclose that the code generation is for a manufacturing and/or processing plants. Sakurai discloses a similar system and method for automatically generating a control program/code for plants such as rolling plants, power plants, and chemical plants (abstract, technical field). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the disclosed system for code generation in Burgess in a manufacturing and/or processing plant. One would have been motivated to generate automation code for controlling a manufacturing and/or process plant to allow a person with no programming knowledge to generate the code, and to make system capable of checking and modifying the function of automatically generated code.

Claim 18: Burgess and Sakurai disclose a system and method for producing a software code as in claim 14 above, and Burgess further discloses input device/means for inputting relevant information in the system for producing the software code (column 14, lines 12-18; fig 9).

9. Claims 15, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess (US 5,805,896) in view of Elmqvist ("A Uniform Architecture for distributed automation", Advances in Instrumentation and Control, Instrument Society of America, Research Triangle Park, NC US, Vol. 46, No. part 2, 1991 Pages, 1599-1608).

Claims 15, and 28: Burgess discloses a system and method for producing a software code as in claims 13, and 26 above, and further discloses that the components can be displayed, moved, and connected using the graphical editor (column 10, lines 37-49), but doesn't explicitly disclose that the a drawing having control relevant information is used for code generation. Elmqvist discloses a similar system for distributed automation with a graphical programming environment for programming/software generation by graphically connecting the predefined modules (abstract, page 1599; paragraph 4, page 1600). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a drawing having control relevant information as description for code generation in Burgess. One would have been motivated to combine the graphically represented components i.e. a drawing of Elmqvist for code generation to help make use of the standard designing tools.

10. Claims 16, 19-25, 30, and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess (US 5,805,896) in view of Sakurai et al. (US

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6,334,076) in further view of Elmqvist ("A Uniform Architecture for distributed automation", Advances in Instrumentation and Control, Instrument Society of America, Research Triangle Park, NC US, Vol. 46, No. part 2, 1991, Pages 1599-1608).

Claim 16: Burgess and Sakurai disclose a system and method for producing a software code as in claim 14 above, but do not explicitly disclose that a drawing having control relevant information is used for code generation. Elmqvist discloses a similar system and method for distributed automation with a graphical programming environment for programming/software generation by graphically connecting the predefined modules (abstract, page 1599; paragraph 4, page 1600). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a drawing having control relevant information as description for code generation in Burgess. One would have been motivated to combine the graphically represented components i.e. a drawing of Elmqvist for code generation to help make use of the standard designing tools.

Claims 19-22, and 30: Burgess and Sakurai disclose a system and method for producing a software code for a manufacturing and/or processing plant as in claims 13-15, 17, and 26 above, but do not explicitly disclose that the material flow, and/or energy flow, and/or information flow is provided as a basis for mapping the directed relationships between the components. Elmqvist discloses a similar system and method for distributed automation with graphical connection

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represent information flow, and a data flow model (page 1601, paragraph 4; page 1605, paragraph 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the material flow, and/or energy flow, and/or information flow as a basis for mapping the directed relationships between the components in Burgess. One would have been motivated to use the material flow, and/or energy flow, and/or information flow as a basis for mapping the directed relationships between the components to make the automation code more effective and error free as the manufacturing and/or processing plant layout and planning is according to the material flow, and/or energy flow, and/or information flow.

Claims 23-25, and 31: Burgess and Sakurai disclose a system and method for producing a software code as in claims 13-15, and 26 above, but do not explicitly disclose that the automation code is provide for central and/or distributed systems. Elmqvist discloses a similar system and method for distributed automation with automated cooperation for distributed objects (page 1599, abstract paragraph 2; page 1605, paragraph 5), but doesn't explicitly disclose that the system could be a central system. However, official notice is taken that it is old and well known within the computer art that if automated code generation is used for distributed system then it could be used for central system too.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the disclosed system in Burgess for central and/or distributed solutions. One would have been motivated to use the

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disclosed system for central and/or distributed solutions to control the distributed components with a central controller or to control the components with a central controller as required.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Merat et al. (US 5,465,221) discloses a system and method for generating a feature based inspection plan.

b. Walacavage et al. (US 6,442,441) discloses a method and system for automatically generating programmable logic controller code.

c. Cheng et al. (US 2002/0010908) discloses a system and method for automatic software code generation.

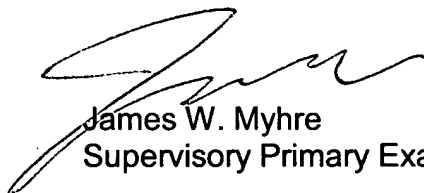
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hirdepal Singh whose telephone number is 571-270-1688. The examiner can normally be reached on Mon-Fri (Alternate Friday Off)8:00AM-5:00PMEST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 703-270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HS
1/31/07



James W. Myhre
Supervisory Primary Examiner